HP StorageWorks

Fabric OS 3.2.1 release notes

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About this document

This section identifies the audience of these Release Notes and provides a high-level description of the information it contains.

Release Notes overview

These Release Notes cover the following major topics:

Audience

These Release Notes are intended for systems administrators and technicians who are responsible for installing, operating, and maintaining Fabric OS version 3.2.1.

Fabric OS 3.2.1 enhancements

Fabric OS v3.2.1 is a maintenance release containing fixes to a number of defects found since the release of Fabric OS v3.2.0a. Aside from these changes, this maintenance release includes the same feature set as the Fabric OS v3.2.0 release.

HP StorageWorks Fabric OS v3.2.1 contains significant enhancements in the areas of Fibre Channel long-distance support, scalability, and manageability. Several improvements since the release of HP StorageWorks Fabric OS v3.1.3 have been incorporated in this release. Major new features include:

- Additional support for the HP StorageWorks Multi-protocol (MP) Router

- Updated security enhancements:

  - RADIUS

  - DH-CHAP authentication

- Improved manageability and ease-of-use for Fabric Watch and Advanced Web Tools

> **NOTE:** HP software release policy is to carry forward all fixes in patches to subsequent maintenance and feature releases of Fabric OS.

Supported switches

Fabric OS v3.2.1 supports the following switches:

- HP StorageWorks SAN Switch 2/8

- HP StorageWorks MSA SAN switch 2/8

- HP StorageWorks SAN Switch 2/16

Fabric OS 3.2.1 updates

Table 1 lists Fabric OS 3.2.1 fixes.

Table 1 Issues resolved in this 3.2.1 release

Issue prior to Fabric OS 3.2.1	Fix
Third party tape drives did not respond to Login (L) bit, based on switch lock L port configuration.	Third party tape drives working with SAN Switch 2/16.
After executing `switchdisable` or `enable` in a large, secure fabric, some SAN Switch 2/16 models experienced queue overflow and rebooted.	SAN Switch 2/16 in large, secure fabrics do not experience queue overflow messages and switch reboot.
No monitoring of basic monitor service without an Advanced Performance Monitoring (APM) license.	Basic monitoring allowed without an Advanced Performance Monitoring (APM) license.
`config upload` failed on switches supporting a large Zone database.	API_MAX_CONFIG size is increased.
SAN Switch 2/16 models panicked when connected to a third party switch during Zoning updates in Interop mode.	SAN Switch 2/16 models operate normally during Zoning updates in Interop mode.
SAN Switch 2/16 models used incorrect buffer-tobuffer (BB) credits when switch BB credit was set less than device BB credit.	Fabric OS 3.2.1 uses same BB credit limit as defined in switch.

Table 1 Issues resolved in this 3.2.1 release (continued)

Issue prior to Fabric OS 3.2.1	Fix
Short burst of bad primitives on the link causes rx_under flow error.	Fabric OS 3.2.1 extends switch tolerance to the number of bad primitives.
If two or more ports zoned together on a SAN Switch 2/16, ZONEGROUPADDFAIL message displayed.	Multiple ports in same Zone function normally.
Email configured via Fabric Watch was not received on certain third party mail servers.	Email header format adjusted.

Technical support

Contact Hewlett-Packard support for hardware, firmware, and software support, including product repairs and part ordering. To assist your support representative and to expedite your call, have the following information available:

- Technical support contact number, if available

- Switch model

- Switch operating system version

- Error messages received

- Output from supportshow command

- Detailed problem description and specific questions

- Description of any troubleshooting steps already performed and results

Switch serial number

The switch serial number and corresponding bar code are provided on the serial number label, as shown here.

```
*FT00X0054E9
FT00X0054E9
```
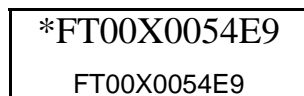
World Wide Name (WWN)

At the CLI prompt, type the wwn command to display the switch WWN.

HP StorageWorks Fabric OS 3.2.1 addendum

The most current 3.2.1 documentation updates are provided in the HP StorageWorks Fabric OS 3.2.1 Addendum. See Accessing documentation, page 6, for detailed instructions on downloading this and other related documents.

Accessing documentation

Additional documentation, including white papers and best practices documents, is available at the HP web site: http://welcome.hp.com/country/us/eng/prodserv/storage.html.

NOTE: HP makes every effort to provide you with the most up-to-date Web retrieval procedures available at time of print. Note, however, that Web page links are subject to change.

To access the technical documentation:

1. Locate the **IT storage products** section of the web page.
2. Under **Networked storage**, click **SAN infrastructure**.
3. From the **SAN infrastructure** web page, locate the **SAN Infrastructure products** section.
4. Click **Fibre Channel Switches**.
5. Locate the **B-Series Fabric** section.
6. Depending on your switch, locate the **B-Series Fabric-Entry-level** subsection. Click the appropriate switch to access Fabric OS documents.
7. Go to the **Support** section, located on the right side of the web page, and click **Technical documents**.
8. From the **HP Business Support Center** web page, locate the **Resources for...** section for your particular switch. Click **Manuals (guides, supplements, addendums, etc)**.

Follow the on-screen instructions to download the applicable documents.For information about Fibre Channel standards, visit the following web site: http://www.t11.org.

Standards compliance

HP products conform to these standards in a manner consistent with accepted engineering practices and procedures. In certain cases, HP may add proprietary supplemental functions to those specified in the standards. We verify conformance with Fibre Channel Standards by subjecting our switches to SANmark Conformance Tests developed by the Fibre Channel Industry Association. Our switches have earned the SANmark logo indicating such conformance. SANmark is a limited testing program and does not test all standards or all aspects of standards.

HP StorageWorks Fabric OS 3.2.1 conforms to the following Fibre Channel Standards:

- FC-AL ANSI X3.272: 1996

- FC-AL-2 NCIT S 332: 1999

- FC-FLA NCIT S TR-20: 1998

- FC-GS-2 NCIT S 348-2000 Rev 7.01

- FC-FG ANSI X3.289: 1996

- FC-PH ANSI X3.230: 1994

- FC-PH-2 ANSI X3.297: 1997

- FC-PH-3 ANSI X3.303: 1998

- FC-PLDA NCIT S TR-19: 1998

- FC-SW-2 Rev 5.3

- FC-VI Rev 1.61

- FC-MI Rev 1.92

- FC-BB Rev 4.7

- FC-FS Rev 1.7

- FC-BB-2 Rev 5.3

- IPFC RFC 2625

- FCP ANSI X3.269: 1996

- FCP-2 Rev 7

Important notes

This section provides information you should be aware of when running Fabric OS 3.2.1.

OS requirements

HP recommends using the *latest* software release versions to get the greatest benefit from the SAN. Refer to the following web site for information: http://www.hp.com

Mixed fabric environment with different switch platforms

Fabric OS v2.6.2, v3.1.2, and v4.2.x introduced a new switch PID format: Extended Edge PID (Format 2). Extended Edge PID is useful if you introduce a Fabric OS 3.2.1 switch into a fabric consisting solely of Fabric OS v2.x/v3.x switches. Before adding a Fabric OS v3.2.1 switch to such a fabric, refer to the *HP StorageWorks Fabric OS procedures 3.1.x/4.1.x user guide* for information on the Extended Edge PID format.

> **NOTE:** Switches must operate with Fabric OS v2.6.2, v3.1.2, v4.2.x or later to use the Extended Edge PID format.

If Extended Edge PID is set (before a downgrade from the current Fabric OS release to an earlier Fabric OS release that does not support the Extended PID format), PID needs to be set back to a supported format, such as Core PID (format 1) or native PID (format 0).

Advanced Web Tool updates

When using a mixed fabric—that is, a fabric that contains v4.x, v3.x, and v2.x switches—HP recommends that you use the most advanced switches to control the fabric. For example, use the 4.x switches as the primary Fibre Channel Switch (FCS), as the location to perform zoning tasks, and as the time server. HP also recommends that you use the most recently released firmware to control the fabric.

If a dialog box is displayed from the Switch Admin window of Advanced Web Tools and the user selects another dialog box from Advanced Web Tools, a window display error occurs. This is a known issue in Java™ 1.3. HP recommends using Java 1.4.1_03.

Two-domain and Four-domain fabric licensing

If your fabric includes a switch with a license for a limited number of switches in the fabric and the fabric exceeds the limit, Advanced Web Tools allows a 45-day grace period during which you can still monitor the switch. Advanced Web Tools periodically displays warning messages.

These messages warn you that your fabric size exceeds the supported switch configuration limit and tells you how long you have before Advanced Web Tools will be disabled. After the 45-day grace period, you will no longer be able to launch Advanced Web Tools.

Installing Mozilla 1.4 on Solaris 8 and Solaris 9

For instructions to install Mozilla 1.4 on Solaris 8 and Solaris 9, go to the web site: http://ftp.mozilla.org/pub/mozilla.org/mozilla/releases/mozilla1.4/mozilla-sparc-sun-solaris2.8_1.4.read me

Mozilla browser support for Switch Admin module

The Mozilla browser does not support the Switch Admin module properly in Fabric OS v2.6.x. In Fabric OS v2.6.2, a warning message is displayed. No warning message is displayed in other v2.6.x versions.

Workaround: Use Netscape 4.7.7 or later.

Browser, OS, and Java Plug-in support

Advanced Web Tools browser, operating system, and Java Plug-in support is updated for Fabric OS v3.2.1. Table 2 identifies the supported browsers, operating systems, and Java Plug-ins for this release. Go to the http://www.hp.com web site for the latest list of supported operating systems.

Table 2 Browsers, operating systems, and Java plug-ins

Priority	Operating system	Browser	Java plug-in
1	Windows 2000	IE 6.0	1.4.2_03
2	Windows XP	IE 6.0	1.4.2_03
3	Windows 2003	IE 6.0	1.4.2_03
4	Solaris 2.8, 2.9	Mozilla 1.6	1.4.2_03
5	Red Hat Linux 9.0	Mozilla 1.6	1.4.2_03
6	Solaris 2.8	Mozilla 1.6	1.4.2_03

Documentation updates

Read this section for late-breaking additions and corrections to documentation.

HP StorageWorks SAN Switch 2/8 EL installation guide, PN: AA–RSB6B–TE

- On page 87, Table 8:
  - The *Temperature* condition refers to the ambient air temperature at the air intake vents on the nonport side of the switch. You should change the *Temperature* condition within the **Condition** heading in the table to *Ambient Temperature* and also add the following note:

> **NOTE:** The temperature inside the switch can be up to 75 degrees Celsius (167 degrees F) during switch operation.

HP StorageWorks SAN Switch 2/16 installation guide, PN: AA–RR84B–TE

- On page 92, Table 8:
  - The *Temperature* condition refers to the ambient air temperature at the air intake vents on the nonport side of the switch. You should change the *Temperature* condition within the **Condition** heading in the table to *Ambient Temperature* and also add the following note:

> **NOTE:** The temperature inside the switch can be up to 75 degrees Celsius (167 degrees F) during switch operation.

- On page 64, Table 4:
  - The following statement should be added to the Port Status LED information for when the port status is "offline":

    "When a Port Status LED indicator light is off, another possible hardware status is offline."